

REMARKS

Claims 1-12 were rejected. Claims 1 and 2 are amended herein to further particularly pointing out and distinctively claiming subject matter which the applicant considers as the invention. Support for the amendment can be found in the Specification, page 10, lines 8-17.

5 No new matter is introduced. Claims 1-12 are pending.

Regarding 35 U.S.C. § 103(a) rejections:

Claims 1, 2 and 5-11 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Hembree et al. (U.S. Pat. No. 6,218,848, hereinafter "Hembree") in view of Alcoe et al. (U.S. Pat. No. 6,051,982, hereinafter "Alcoe"). Claims 3 and 12 were rejected as being
10 unpatentable over Hembree in view of Alcoe and further in view of Witt (U.S. Pat. No. 5,136,252). Claim 4 was rejected as being unpatentable over Hembree in view of Alcoe and further in view of Ludwig et al. (U.S. Pat. No. 6,218,846, hereinafter "Ludwig"). The rejections are respectfully traversed and reconsideration is earnestly requested.

15 The examiner is correct in citing Hembree for disclosing a probe apparatus for testing a circuit chip [col. 2, lines 35-40] comprising a probe group having two or more probes [col. 2, lines 62-64]. However, the examiner is incorrect in citing Hembree for independently conductively contacting a single terminal of the chip being tested. The cited column 5, lines 30-39, of Hembree refer to FIG. 4 where the details of the probe card **20** are illustrated. As
20 shown in FIG. 4, the probe contacts **22** on the probe card **20** are arranged in patterns corresponding to the patterns of the wafer contacts **14**. In other words, each probe contact **22** corresponds to a wafer contact (terminal) **14**.

This one-to-one relationship between the probe contact **22** and corresponding wafer contact **14** was discussed in the previous Reply. That is, in Hembree, one probe contacts one
25 terminal. In fact, Hembree teaches away from two or more probes independently conductively contacting a single terminal as set forth in the claimed invention because Hembree requires that the patterns of probe contacts **22** must exactly match the patterns of the wafer contacts **14** [col. 5, lines 41-43]. This one-to-one requirement is evident throughout Hembree's teaching, e.g., contacts **22-1**, **22-2** are configured to electrically engaging
30 corresponding wafer contacts **14Vcc-1**, **14Vcc-2** in one-to-one fashion [FIG. 6A]. Nothing in Hembree teaches or suggests grouping or bundling more than one probe contacts **22** together

for independently conductively contacting a single wafer contact 14.

Hembree's one-to-one design fundamental between probe contacts and corresponding wafer contacts explains why Hembree's invention does not need a guiding boundary for the probe group. Alcoe is cited for its alleged teaching of a guiding boundary [Fig. 1, element #17]. However, element 17 of Alcoe refers to a housing. A group of stationary probe members 19 are located inside the housing 17. In other words, the housing 17 is not a guiding boundary. The combination of Hembree and Alcoe discussed in the previous Reply is incorporated herein by reference. As a whole, the combination of Hembree and Alcoe does not teach or suggest all the claimed elements including a probe group having two or more probes within a guiding boundary for independently conductively contacting a single terminal of said circuit chip, as taught and claimed in the present application.

The combinations of Hembree in view of Alcoe and further in view of Witt and Hembree in view of Alcoe and further in view of Ludwig were discussed in the previous Reply and are incorporated herein by reference. It is submitted that none of these alleged combinations are applicable to the claimed invention in view of the "one probe contact-to-one wafer contact" design of Hembree's invention.

As taught and claimed in the present invention, two or more independent probes are placed into one hole to contact a single terminal [Figs. 2 and 4; Spec. page 9, lines 17-29; Spec. page 13, lines 5-7]. The inventiveness of the present application lies in the many-to-one configuration that solves the issue of tight pitch and small spacing that two or more independently located probes would have.

The Office action stated that it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a guiding boundary for a probe group as taught by Alcoe into Hembree for the purpose of "aligning a probe group with a single contact terminal." However, the Office action did not articulate or cited any reference to explain why one skilled in the art would be motivated to do so, given the fact that neither Alcoe nor Hembree teaches a probe group of many probes contacting one single terminal. The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990) (emphasis in original and added.) Accordingly, the examiner has failed to establish a *prima facie* case of obviousness

Since obviousness cannot be established absent some teaching, suggestion or incentive supporting the modification/combination, the examiner has not established a *prima facie* case of obviousness (ACS Hospital Systems, Inc. v. Montefiore Hospital, 732 F. 2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984)). Absent such a showing in the prior art, the examiner
5 has impermissibly used the applicant's teaching to hunt through the prior art for the claimed elements and combine them as claimed (see *In re Vaeck*, 947 F. 2d 488, 20 USPQ 2d 1438 (Fed. Cir. 1991); *In re Bond*, 910 F. 2d 831, 15 USPQ 2d 1566 (Fed. Cir. 1990); *In re Laskowski*, 871 F. 2d 115, 117, 10 USPQ 2d 1397, 1398 (Fed. Cir. 1989)). The use of hindsight is never permissible to establish obviousness.

10

Conclusion

For at least the foregoing reasons, Applicant respectfully submits that the claimed invention is not obvious over the various combinations based on Hembree. In particular, independent claims 1 and 11 recite subject matter not reached by the applicable prior art
15 under 35 USC § 103(a). As such, it is submitted that independent claims 1 and 11 are patentable and therefore should be allowed.

Reliance is placed on *In re Fine*, 5 USPQ 2d 1596, 1600 (Fed. Cir. 1988) and *Ex parte Kochan*, 131 USPQ 204 (Bd. App. 1960) for allowance of the dependent claims 2-10 and 12,
20 since they differ in scopes from their respective parent independent claims 1 and 11 which are submitted as patentable.

This Reply is submitted as proper and complete in that it places the application in a condition for allowance. Particularly, the present Reply is submitted as not adding new
25 matters and not requiring further searches. Since the examiner has done a thorough search in the previous actions in light of the entire disclosure and claims, no new search would be necessary.

Accordingly, Applicant respectfully submits that, by the amendments presented herein, the present application is in a condition for allowance. Favorable consideration and a
30 Notice of Allowance of all the claims are therefore earnestly solicited. The examiner is invited to telephone the undersigned at (408) 260-7300 for discussing an Examiner's Amendment or

other suggested actions for accelerating prosecution and moving the present application to allowance.

Respectfully submitted,



Tian Hua Gu, Reg. No. 52,480

Katharina Wang Schuster, Reg. No. 50,000

LUMEN INTELLECTUAL PROPERTY SERVICES
45 Cabot Avenue, Suite 110
Santa Clara, CA 95051-6670
(408) 260-7300

KWS Active Projects
PRO-128/Amt B

MARKED UP VERSION OF THE AMENDED CLAIMS:

- 1 1. (Twice Amended) A probe apparatus for testing a circuit chip, said probe
2 apparatus comprising a probe group having two or more probes within a guiding
3 boundary for independently conductively contacting a single terminal of said
4 circuit chip and allowing a test path resistance be measured without affecting said
5 circuit chip.

- 1 2. (Amended) The probe apparatus of claim 1, further comprising an electronic
2 circuit capable of recognizing [a] said test path resistance and correspondingly
3 compensating a voltage drop of an operational signal passing through at least one
4 of said probes.